

ABSTRACT

The present invention relates to a booster circuit of a non-volatile memory requiring a plus or minus high voltage equal to or higher than a power-supply voltage. The present invention can generate a high voltage of approximately 12 V even at a low power-supply voltage equal to or lower than 3 V and generate not only a plus high voltage but also a minus high voltage by the same circuit.

Also, by combining a body-controlled type parallel charge pump, which is a booster circuit according to the present invention, with a serial-type charge pump, two types of high voltages can be efficiently generated and a reduction in chip areas can be achieved.